Constituents	Units	Discharge Limitations Monthly Average	Daily Maximum
Nitrate + Nitrite-N	mg/L lbs/day[2]	---- ----	8.0[6] 0.3
Ammonia-N	mg/L lbs/day	---- ----	10.1® 0.34
Nitrate-N	mg/L lbs/day	---- ----	8.0 0.27
Nitrite-N	mg/L lbs/day	---- ----	1.0 0.03
Cadmium	µg/L lbs/day	---- ----	3.1*β 0.0001*β
Selenium	µg/L lbs/day	---- ----	5#β 0.0002#β
Zinc	µg/L lbs/day	---- ----	159*β 0.005*β
Copper[3,4]	µg/L lbs/day[2]	---- ----	13.5 0.0004
Lead[3]	µg/L lbs/day[2]	---- ----	5.2 0.0002
Mercury[3]	µg/L lbs/day[2]	---- ----	0.10 0.000003
TCDD	µg/L lbs/day[2]	---- ----	2.8E-08 9.3E-12
Naphthalene	µg/L lbs/day[2]	---- ----	21 0.0007
Total petroleum hydrocarbons	µg/L lbs/day[2]	---- ----	100 0.003
Ethylene dibromide	µg/L lbs/day[2]	---- ----	50 0.002
Tertiary butyl alcohol 1,4-Dioxane	µg/L lbs/day[2] µg/L lbs/day[2]	---- ---- ---- ----	12 0.0004 3 0.0001
Perchlorate	µg/L lbs/day[2]	---- ----	6.0 0.0002

6. With the exception of Outfalls 001 and 002, in the event that an effluent limitation set forth above for a pollutant other than a radioactive material is exceeded and the Discharger presents within 30 days of the date of discovery documentation that (i) discharges from a solid waste management unit (unit) regulated by DTSC are causing or contributing to the violation, and (ii) the Discharger was in compliance with all applicable

[6] The limit applies to discharges from Outfall 008 only.
[7] The limit is applicable for discharges from Outfalls 003 through 007, 009 and 010 which flows to Calleguas Creek. It is not applicable at Outfall 008 which dicharges to Bell Creek and subsequently the Los Angeles River.

requirements of DTSC permits and corrective action requirements for the unit, and (iii) modifications to DTSC's permit or corrective action requirements are necessary to consistently comply with this Order, then the Discharger, DTSC, and Regional Board will work cooperatively to develop a schedule that is as short as possible to take appropriate actions under the RCRA corrective action requirements or permits, as appropriate, to ensure compliance with this Order. This Order may be reopened and modified, in accordance with applicable laws and regulations, or a Time Schedule Order issued to incorporate appropriate interim limits while the appropriate actions are being taken under the RCRA corrective action requirements or permits.

C. Receiving Water Limitations

1. The discharge shall not cause the concentration of constituents in Arroyo Simi in the vicinity of the discharges, from Outfalls 003 through 007, 009, and 010, to exceed the following limits:

Constituents	Units	Discharge Limitations Monthly Average	Discharge Limitations Daily Maximum
Chlorpyrifos	µg/L	---	0.02[1]
Diazinon	µg/L	---	0.16[1]
Chlordane	µg/L	---	0.001
4,4-DDD	µg/L	---	0.0014
4,4-DDE	µg/L	---	0.001
4,4-DDT	µg/L	---	0.001
Dieldrin	µg/L	---	0.0002
PCBs	µg/L	---	0.0003
Toxaphene	µg/L	---	0.0003

[1] Limit effective March 24, 2008. The TMDL specifies interim limits which are effective from March 24, 2006 through March 23, 2008.

2. Interim receiving water limitations effective from the effective date of the permit through March 23, 2008 for discharges to Arroyo Simi from Outfalls 003 through 007, 009, and 010. The final effluent limitations in Section I.C.1. above for these constituents are effective from March 24, 2008 through the term of the permit.

Constituents	Units	Discharge Limitations Monthly Average	Discharge Limitations Daily Maximum
Chlorpyrifos	µg/L	---	0.74
Diazinon	µg/L	---	0.91

3. The discharge shall not cause any of the following conditions to exist in the receiving waters at any time:

   a. Floating, suspended or deposited macroscopic particulate matter or foam;

   b. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   c. Visible, floating, suspended or deposited oil or other products of petroleum origin;

   d. Bottom deposits or aquatic growth; or,

   e. Toxic or other deleterious substances to be present in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. No discharge shall cause a surface water temperature rise greater than 5°F above the natural temperature of the receiving waters at any time or place.

3. The discharge shall not cause the following limits to be exceeded in the receiving waters at any place within one foot of the water surface:

   a. The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units;

   b. Dissolved oxygen shall not be less than 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation;

   c. Dissolved sulfide shall not be greater than 0.1 mg/L;

4. Toxicity limitations for discharges from Outfalls 001 through 014, 018, and Outfall 019:

   a. Acute Toxicity Limitation and Requirements

      1. The acute toxicity of the effluent shall be such that: (i) the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and (ii) no single test producing less than 70 % survival.

2. If either of the above requirements (Section I.C.4.a.1) is not met, the Discharger shall conduct six additional tests over a six-week period. The discharger shall ensure that they receive results of a failing acute toxicity test within 24 hours of the close of the test and the additional tests shall begin within 3 business days of the receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.

3. If the initial test and any of the additional six acute toxicity bioassay test result in less than 70% survival, including the initial test, the Discharger shall immediately begin a TIE.

4. The Discharger shall conduct acute toxicity monitoring as specified in Monitoring and Reporting Program No. 6027.

b. Chronic Toxicity Limitation and Requirements:

1. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.)

2. If the chronic toxicity of the effluent exceeds 1.0 TU_c, the Discharger shall immediately implement an accelerated chronic toxicity testing according to MRP No. 6027, Section IV.D. If the results of two of the six accelerated tests exceed 1.0 TU_c, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Workplan. (see MRP No. 6027, Section IV.E.).

3. The Discharger shall conduct chronic toxicity monitoring as specified in MRP No. 6027.

4. The chronic toxicity of the effluent shall be expressed and reported in toxic units, where:

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

5. Preparation of an Initial Investigation TRE Workplan

   i. The Discharger shall submit a detailed initial investigation Toxicity Reduction Evaluation (TRE) workplan to the Executive Officer of the Regional Board for approval within 90 days of the effective date of this permit. The Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance or current versions. At a minimum, the TRE workplan must contain the provisions in Attachment C. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

   ii. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency;

   iii. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and,

   iv. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (See MRP Section IV.E.3. for guidance manuals).

5. The discharge shall not cause a violation of any applicable water quality standard for receiving waters.

   If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments, thereto, the Regional Board will revise and modify this Order in accordance with such standards.

D. Final Ambient WLAs for Pollutants in Sediment for Storm Water Dischargers

The following are the final ambient WLAs. They are measured as in-stream annual averages at the base of each subwatershed where the discharges are located.

The final WLAs must be achieved and become sediment limits after the sampling indicates that the Discharger is able to comply with the final WLAs or at the end of the 20-year compliance schedule specified in the TMDL (March 24, 2026), whichever occurs first. In either event, the permit will be reopened at that time to include appropriate sediment limits.

Constituents	Units	Discharge Limitations Monthly Average	Daily Maximum
Chlordane	µg/g	--	0.0033
4,4-DDD	µg/g	--	0.002
4,4-DDE	µg/g	--	0.0014
4,4-DDT	µg/g	--	0.0003
Dieldrin	µg/g	--	0.0002
PCBs	µg/g	--	0.12
Toxaphene	µg/g	--	0.0006

E. Interim Ambient WLAs for Pollutants in Sediment for Storm Water Dischargers

The following sediment interim WLAs are effective as sediment limitations from November 23, 2007, through June 10, 2009. If the permit is administratively extended, these WLAs will continue to be in effect up to November 23, 2012 (five years from the effective date of this permit).

Constituents	Units	Discharge Limitations Monthly Average	Daily Maximum
Chlordane	µg/g	--	0.0033
4,4-DDD	µg/g	--	0.014
4,4-DDE	µg/g	--	0.17
4,4-DDT	µg/g	--	0.025
Dieldrin	µg/g	--	0.0011
PCBs	µg/g	--	25.7
Toxaphene	µg/g	--	0.23

The implementation schedule for the TMDL (Resolution No. R4-2005-0010) provides for interim sediment limitations through March 24, 2026 (twenty years from the effective date of the Basin Plan Amendment).

II. Requirements

A. Pollution Prevention and Best Management Practices Plans

The Discharger shall develop, within 90 days of the effective date of this Order, the following plans. If necessary, the plans shall be updated to address any changes in operation and/or management of the facility. Updated plans shall be submitted to the Regional Board within 30 days of revision.

1. A *Storm Water Pollution Prevention Plan* (SWPPP) that describes site-specific management practices for minimizing storm water runoff from being contaminated, and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The SWPPP shall be

developed in accordance with the requirements contained in Attachment A and submitted to the Regional Board within 90 days of the effective date of this Order.

2. A *Best Management Practices Plan* (BMPP). The purpose of the BMPP is to establish site-specific procedures that will prevent the discharge of pollutants in non-storm water discharges. The BMPP shall be site-specific and shall cover all areas of the facility.

3. *Compliance Plan.* The interim sediment limitations stipulated in section I.E. of this Order for OC Pesticides and PCBs in sediment shall be in effect for a period not to extend beyond November 23, 2012. Thereafter, the Discharger shall comply with the limitations specified for OC Pesticides and PCBs in section I.D. in of this Order.

4. The Discharger shall develop and submit, within one year of the effective date of this Order, a compliance plan that will identify the measures that will be taken to reduce the concentrations of OC Pesticides and PCBs in sediment at the base of the subwatershed discharging to Arroyo Simi. This plan must evaluate options to achieve compliance with the final sediment limitations within the deadline specified above.

5. The Discharger shall submit annual reports to describe the progress of studies and or actions undertaken to reduce the OC Pesticides and PCBs in the effluent and the sediment, and to achieve compliance with the limitations in this Order by the deadline specified above. The Regional Water Board shall receive the first annual progress report at the same time the annual summary report is due, as required in section VI. of the MRP.

6. *Pollutant Minimization Plan* (PMP). The purpose of the BMPP is to establish site-specific procedures that will prevent the discharge of pollutants in non-storm water discharges. The BMPP shall be site-specific and shall cover all areas of the facility.

   i. The Discharger shall develop a PMP to maintain effluent concentrations of OC Pesticides and PCBs at or below the effluent limitations specified in Receiving Water Limitations section I.C.1 and Interim Ambient Mass of Pollutants in Sediment for Storm water Dischargers specified in section I.E. of this Order. The PMP shall include the following:

      a. Annual review and monitoring of the receiving water, sediment in the receiving water, and the effluent for OC Pesticides and PCBs;

      b. Submittal of a control strategy designed to proceed toward the goal of maintaining effluent concentrations at or below the effluent limitation;

c. Implementation of appropriate cost-effective control measures consistent with the control strategy;

d. An annual status report that shall be sent to the Regional Water Board at the same time the annual summary report is submitted in accordance with section I.B of the MRP, and include:

(i) All PMP monitoring results for the previous year;

(ii) A list of potential sources of OC Pesticides and PCBs;

(iii) A summary of all actions undertaken pursuant to the control strategy;

(iv) A description of actions to be taken in the following year.

B. Pursuant to the requirements of 40 CFR 122.42(a), the Discharger must notify the Board as soon as it knows, or has reason to believe (1) that it has begun or expected to begin, to use or manufacture a toxic pollutant not reported in the permit application, or (2) a discharge of toxic pollutant not limited by this Order has occurred, or will occur, in concentrations that exceed the specified limitations in 40 CFR 122.42(a).

C. Compliance Determination

1. Compliance with single constituent effluent limitation – If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement II. C. of *M&RP)*, then the Discharger is out of compliance.

2. Compliance with monthly average limitations - In determining compliance with monthly average limitations, the following provisions shall apply to all constituents:

a. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the monthly average limit for that constituent, the Discharger has demonstrated compliance with the monthly average limit for that month.

b. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the monthly average limit for any constituent, the Discharger shall collect four additional samples as early as flow is available during the month. All five analytical results shall be reported in the monitoring report for that quarter, or 45 days after results for the additional samples were received, whichever is later.

When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement II. C. of M&RP), the numerical average of the analytical results of these five samples will be used for compliance determination.

When one or more sample results are reported as "Not-Detected (ND)" or "Detected, but Not Quantified (DNQ)" (see Reporting Requirement II. C. of *M&RP*), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

c. In the event of noncompliance with a monthly average effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the monthly average effluent limitation has been demonstrated.

d. If only one sample was obtained for the month or more than a monthly period and the result exceed the monthly average, then the Discharger is in violation of the monthly average limit.

3. Compliance with effluent limitations expressed as a sum of several constituents – If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

4. Compliance with effluent limitations expressed as a median – in determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

   a. If the number of measurements (n) is odd, then the median will be calculated as = $X_{(n+1)/2}$, or

   b. If the number of measurements (n) is even, then the median will be calculated as = $[X_{n/2} + X_{(n/2)+1}]$, i.e. the midpoint between the n/2 and n/2+1 data points.

5. Compliance with the pH limitation – If the receiving water pH downstream of the discharge, exceeds 8.5 pH units as a result of:

   a. high pH in the storm water, or
   b. elevated pH in the receiving water upstream of the discharge,

   then the exceedance shall not be considered a violation.

6. Compliance with the temperature limitation – If the receiving water temperature downstream of the discharge, exceeds 86°F as a result of:

   a. high temperature in the ambient air, or
   b. elevated temperature in the receiving water upstream of the discharge,

   then the exceedance shall not be considered a violation.

7. The Discharger shall comply with benchmarks and receiving water limitations through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the BMP plan and its components and other requirements of this Order including any modifications. The BMP plan and its components shall be designed to achieve compliance with receiving water limitations. If exceedances of Water Quality Objectives or Water Quality Standards (collectively, Water Quality Standards) persist, not withstanding implementation of the BMP and its components and other requirements of this permit, the Discharger shall assure compliance with discharge prohibitions and receiving water limitations by complying with the following procedure:

   a. Upon a determination by either the Permittee or the Regional Board that discharges are causing or contributing to an exceedance of an applicable Water Quality Standard, the Discharger shall within 24 hours notify and thereafter submit a revised BMP compliance report (as described in the Monitoring and Reporting Program) to the Regional Board that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedances of Water Quality Standards. This BMP Compliance Report is due to the Regional Board 60 days after the second reported exceedance of a benchmark. The BMP Compliance Report shall include an implementation schedule along with descriptions and proposed installation locations of the upgrades or new BMPs. The Executive Officer at the Regional Board may require modifications to the BMP Compliance Report.

   b. Submit any modifications to the BMP Compliance Report required by the Regional Board within 30 days of notification.

   c. Within 30 days following the approval of the BMP Compliance Report, the Discharger shall revise the BMP Plan and its components and monitoring program to incorporate the approved modifications that have been and will be implemented; and implementation schedule, and any additional monitoring required.

   d. Implement the revised BMP plan and its components and monitoring program according to the approved schedule.

8. So long as the Discharger has complied with the procedures set forth above and is implementing the revised BMP plan and its components, the Discharger does not have to repeat the same procedure for continuing or recurring exceedances of the same effluent limitations or receiving water limitation unless directed by the Regional Board to develop additional BMPs.

D. In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for "Not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (DNQ) for the calculation of the monthly average concentration. To be consistent with section II.E.3., if all pollutants belonging to the same group are reported as ND or DNQ, the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentration.

E. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes. Discharge of chlorine for disinfection in plant potable and service water systems and in sewage treatment is authorized.

F. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

G. There shall be no discharge of PCB compounds, such as those once commonly used for transformer fluid.

H. Compliance with the sediment effluent concentrations will be determined by calculating the in-stream annual average at the base of each subwatershed where the discharges are located. The Boeing SSFL discharge is located in Arroyo Simi and the sediment concentration at Arroyo Simi East of Hitch Boulevard or at Simi Valley Water Quality Control Plant should not exceed the interim effluent limitations. Since the facility is located near the top of the watershed, the Discharger may choose to collect the sediment samples closer to the facility.

I. The Discharger shall notify the Executive Officer in writing no later than six months prior to planned discharge of any chemical, other than chlorine or other product previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

a. Name and general composition of the chemical,
b. Frequency of use,
c. Quantities to be used,
d. Proposed discharge concentrations, and
e. USEPA registration number, if applicable.

No discharge of such chemical shall be made prior to the Executive Officer's approval.

J. The Regional Board and USEPA shall be notified immediately by telephone, of the presence of adverse conditions in the receiving waters or on beaches and shores as a result of wastes discharged; written confirmation shall follow as soon as possible but not later than five working days after occurrence.

III. Provisions

A. This Order includes the attached *Standard Provisions and General Monitoring and Reporting Requirements* (Standard Provisions, Attachment N). If there is any conflict between provisions stated hereinbefore and the attached Standard Provisions, those provisions attached herein prevail. Boeing shall report to the Regional Board any monitoring data that exceeds the detection limit for monitored constituents without effluent limitations. The report shall be reported, via facsimile, within 24 hours of the Discharger receiving the data from the lab. Regional Board staff will bring a reopener to the Regional Board within 90 days of determining that reasonable potential exists to cause or to contribute to an exceedance of water quality standards.

B. This Order includes the attached Monitoring and Reporting Program (Attachment T). If there is any conflict between provisions stated in the Monitoring and Reporting Program and the Standard Provisions, those provisions stated in the Monitoring and Reporting Program prevail.

C. This Order may be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62, 122.63, 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this order and permit, endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

D. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Board to local agencies.

E. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

F. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations

established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, and 423 of the Federal Clean Water Act and amendments thereto.

IV. Reopeners

A. This Order may be reopened and modified, in accordance with SIP Section 2.2.2.A, to incorporate new limits based on future reasonable potential analysis to be conducted, upon completion of the collection of additional data by the discharger. Not withstanding the foregoing, in the event that reasonable potential analyses indicate that a pollutant has reasonable potential, the Regional Board staff shall bring an appropriate modification to the Regional Board, at the next practicable Board meeting.

B. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach.

C. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include new minimum levels (MLs).

D. This Order may be reopened and modified to consider incorporation of a site specific or regional design storm (based on the evaluation of the results of the Design Storm Project) and subsequent policy considerations.

E. This Order may be reopened and modified, to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for Los Angeles River or the Calleguas Creek.

F. This Order may be reopened upon the submission by the discharger, of adequate information, as determined by the Regional Board, to provide for dilution credits or a mixing zone, as may be appropriate.

G. This Order may be reopened and modified, to revise the toxicity language once that language becomes standardized.

H. In accordance with Provision I.B.7, this Order may be reopened and modified to incorporate interim limits, to the extent authorized by law, while DTSC revises and reissues updated RCRA corrective action requirements or permits, as appropriate, to ensure compliance with this Order.

I. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this order and permit, endangerment to human health or the environment resulting from the permitted activity.

V. Expiration Date

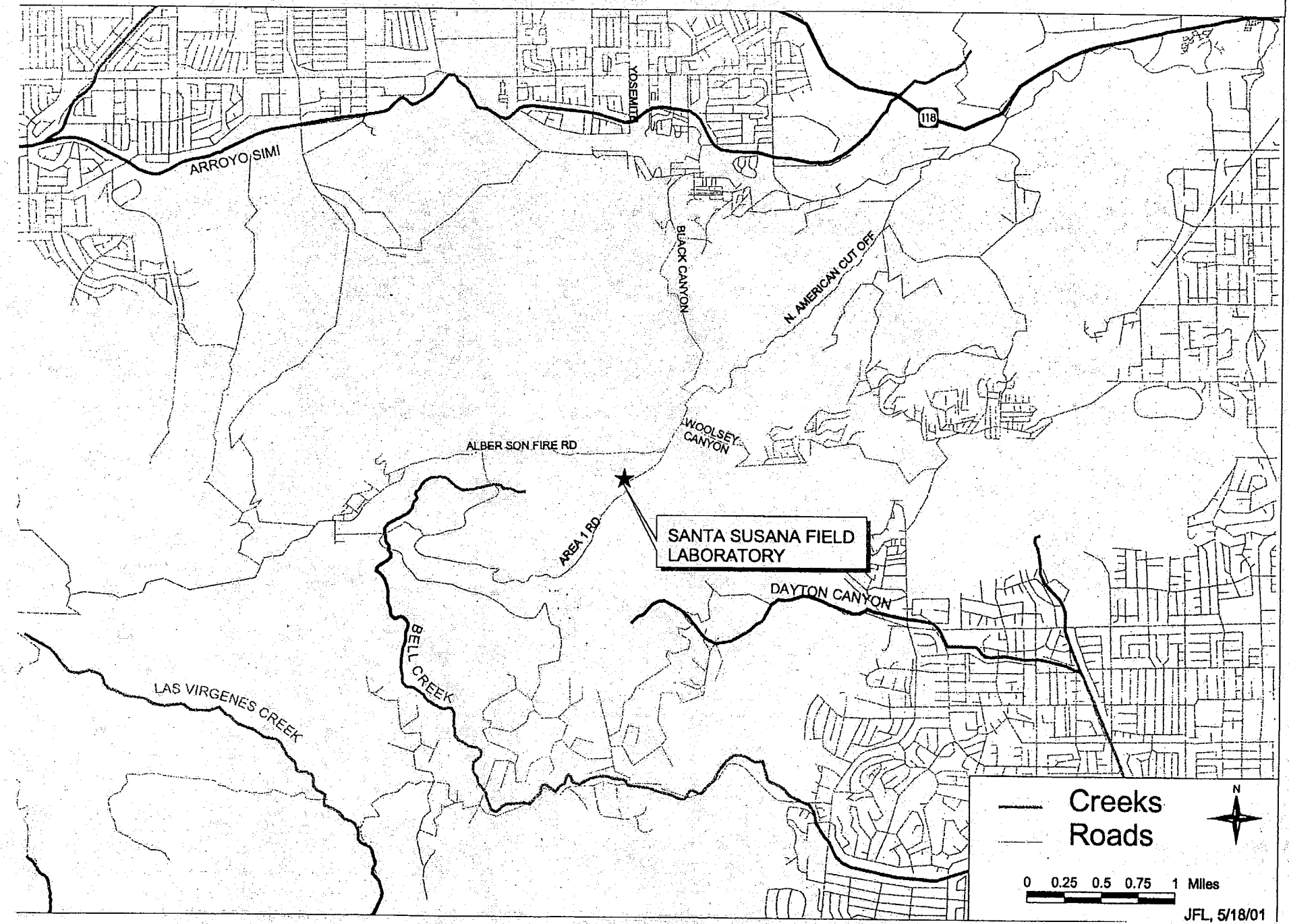
This Order expires on June 10, 2009.

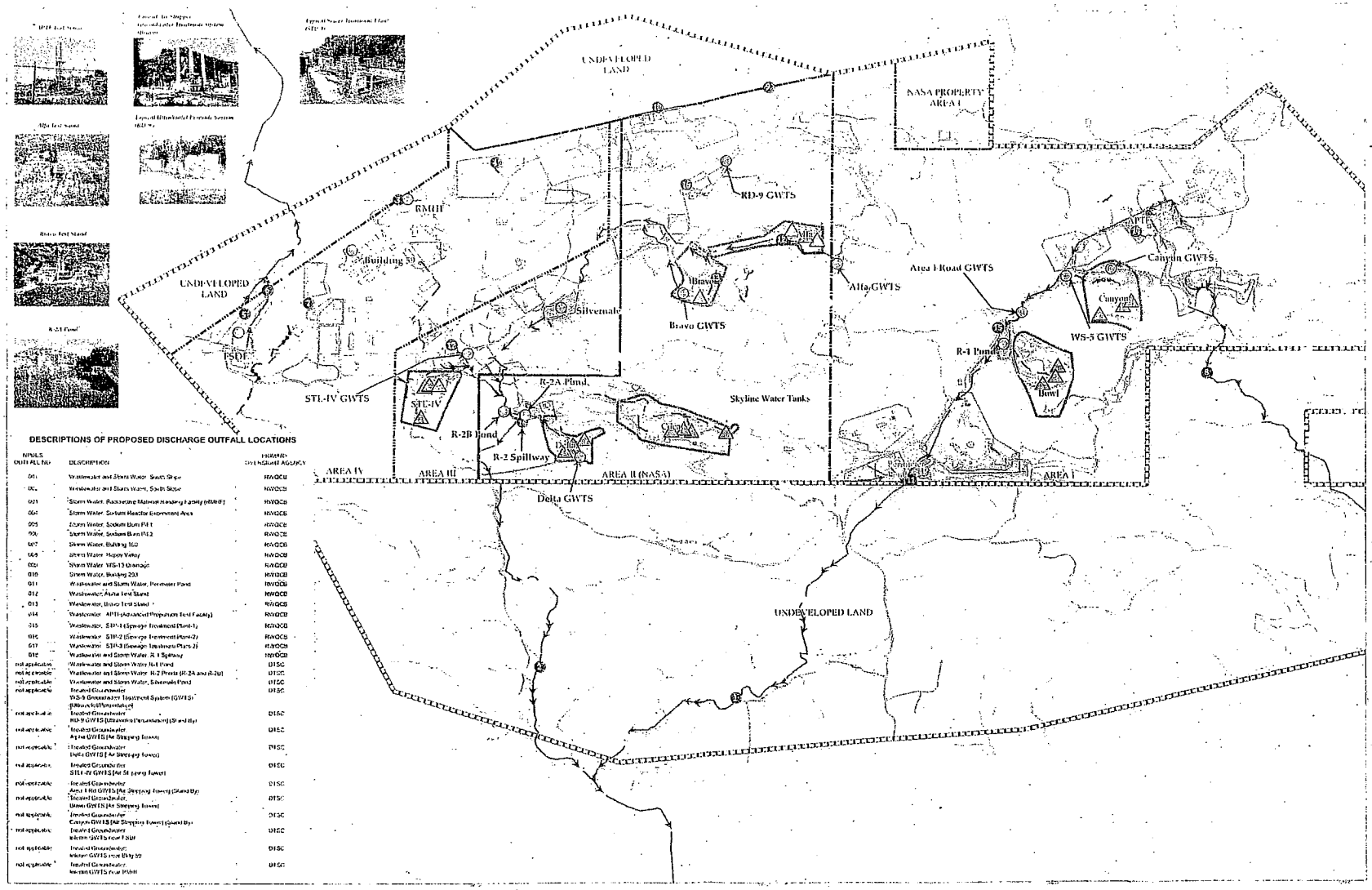
The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the expiration date as application for issuance of new waste discharge requirements.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on November 1, 2007.

Tracy J. Egoscue
Executive Officer

SANTA SUSANA FIELD LABORATORY AND VICINTY - FIGURE 1





DESCRIPTIONS OF PROPOSED DISCHARGE OUTFALL LOCATIONS

NPDES OUTFALL NO.	DESCRIPTION	PRIMARY OVERSIGHT AGENCY
001	Wastewater and Storm Water, South Slope	RWQCB
002	Wastewater and Storm Water, South Slope	RWQCB
003	Storm Water, Rocketdyne Materials Handling Facility (RMHF)	RWQCB
004	Storm Water, Sodium Reactor Experiment Area	RWQCB
005	Storm Water, Sodium Burn Pit 1	RWQCB
006	Storm Water, Sodium Burn Pit 2	RWQCB
007	Storm Water, Building 163	RWQCB
008	Storm Water, Happy Valley	RWQCB
009	Storm Water, WS-13 Drainage	RWQCB
010	Storm Water, Building 203	RWQCB
011	Wastewater and Storm Water, Perimeter Pond	RWQCB
012	Wastewater, Alfa Test Stand	RWQCB
013	Wastewater, Bravo Test Stand	RWQCB
014	Wastewater, APTF (Advanced Propulsion Test Facility)	RWQCB
015	Wastewater, STP-1 (Sewage Treatment Plant-1)	RWQCB
016	Wastewater, STP-2 (Sewage Treatment Plant-2)	RWQCB
017	Wastewater, STP-3 (Sewage Treatment Plant-3)	RWQCB
018	Wastewater and Storm Water, R-1 Spillway	RWQCB
not applicable	Wastewater and Storm Water, R-1 Pond	DTSC
not applicable	Wastewater and Storm Water, R-2 Ponds (R-2A and R-2B)	DTSC
not applicable	Wastewater and Storm Water, Silvernale Pond	DTSC
not applicable	Treated Groundwater, WS-5 Groundwater Treatment System (GWTS) (Ultraviolet/Peroxide)	DTSC
not applicable	Treated Groundwater, RD-9 GWTS (Ultraviolet/Peroxide) (Stand By)	DTSC
not applicable	Treated Groundwater, Alfa GWTS (Air Stripping Tower)	DTSC
not applicable	Treated Groundwater, Delta GWTS (Air Stripping Tower)	DTSC
not applicable	Treated Groundwater, STL-IV GWTS (Air Stripping Tower)	DTSC
not applicable	Treated Groundwater, Area I Rd GWTS (Air Stripping Tower) (Stand By)	DTSC
not applicable	Treated Groundwater, Bravo GWTS (Air Stripping Tower)	DTSC
not applicable	Treated Groundwater, Canyon GWTS (Air Stripping Tower) (Stand By)	DTSC
not applicable	Treated Groundwater, Interim GWTS near F&M	DTSC
not applicable	Treated Groundwater, Interim GWTS near Bldg 59	DTSC
not applicable	Treated Groundwater, Interim GWTS near RMHF	DTSC

COORDINATES IN STATE PLANE NAD 83, ZONE V

Legend

- NPDES Outfalls (RWQCB Primary Oversight Authority)
- DTSC Primary Oversight Authority
- Treated Effluent Pathways
- HPDE Transmission Pipelines
- Natural Drainage
- Concrete Lined Drainage
- Graded Drainage
- Surface Water Reclamation Ponds
- Water Tanks
- Rocket Engine Test Stand RFI Sites
- Groundwater Remediation Facilities (GRF)
- Former Surface Impoundments (TPCA Evaluated)
- Existing Test Stand With Engine Test Fire Quenching Operation
- Existing Test Stand Without Engine Test Fire Quenching Operation
- Dismantled Test Stand

Base Map Legend

- SSFL Property Boundary
- Administrative Area Boundary
- RFI Site Boundary

NPDES Permit Related Features
Santa Susana Field Laboratory

MWH

FIGURE 2

ATTACHMENT "A"

SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. *Implementation Schedule*

A storm water pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this General Permit in accordance with the following schedule.

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement the SWPPP no later than October 1, 1992. Facility operators beginning industrial activities after October 1, 1992 shall develop and implement the SWPPP when industrial activities begin.

b. Existing facility operators that submitted a Notice of Intent (NOI), pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in a timely manner, but in no case later than August 1, 1997.

2. *Objectives*

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, overhead coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

3. *Planning and Organization*

a. *Pollution Prevention Team*

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Section B of this General Permit. The SWPPP shall clearly identify the General Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

b. *Review Other Requirements and Existing Facility Plans*

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

4. *Site Map*

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

6. *Description of Potential Pollutant Sources*

a. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302)

that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this General Permit.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D. are prohibited by this General Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, boiler blowdown, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D. are authorized by this General Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

d. Other than as provided in Provisions B.11, B.12, and E.2 of the General Permit, the SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this General Permit.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in Provision E.2 or Sections A.1, A.9, A.10.c, and A.10.d of this General Permit due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

f. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

Attachment C

GENERIC TOXICITY REDUCTION EVALUATION WORKPLAN (TRE)
INDUSTRIAL

1. Information and Data Acquisition
   - a. Regulatory information
     - i. NPDES permit limits
     - ii. Trigger
   - b. Facility monitoring data
     - i. NPDES monitoring data
     - ii. In-house monitoring data
     - iii. State agency monitoring data
   - c. Plant and Process Description
     - i. Process and treatment plant description
       - (1) numbers and types of streams
       - (2) their size
       - (3) scheduled changes or events in process stream operation
       - (4) types and configurations of equipment
       - (5) flow equalization facilities
       - (6) records of treatment plant upsets
     - ii. Physical/chemical monitoring data
       - (1) chemical analyses of process streams
       - (2) physical/chemical analyses of treatment streams

2. Housekeeping
   - a. Initiation of housekeeping study
     - i. Identify areas which may contribute to toxicity
     - ii. Reduce these contributions through best management practices (BMPs), administrative, and procedural controls
   - b. Evaluation of housekeeping practices
     - i. Review of plant policies
     - ii. "Walk-through" inspection
   - c. Identification of potential problem areas
     - i. Probability of release of toxic material
     - ii. Type and frequency of release which may occur
     - iii. Quantity of toxic substances involved
     - iv. Toxicity of substances released
     - v. Potential downstream impact of the substances released
     - vi. Effect of release on final effluent
   - d. Identification of corrective measures
     - i. Area cleanup
     - ii. Process or operational changes
     - iii. Material loss collection and recovery
     - iv. Chemical and biological testing of contained waters prior to release from diked storage areas
     - v. Increased storage capacity for contained waters
     - vi. Equipment modifications or changes
   - e. Selection of corrective measures
   - f. Implementation of corrective measures

3. Treatment Plant Optimization
   - a. Evaluation of influent wastestreams
     - i. Raw chemicals or materials used in the process
     - ii. Byproducts or reaction products produced during the process
     - iii. Reaction vessels, valves, piping systems, overflow points, and other mechanical aspects of the system
     - iv. Wastestreams produced, volumes, and routing paths

v. Non-point sources

b. Description and evaluation of the treatment system
   i. Design basis for each constituent, including variability in flow conditions and concentrations
   ii. Treatment sequence
   iii. Performance projections by constituents
   iv. Operational flexibility of each process
   v. Treatment objectives and projected effluent standards

c. Analysis of treatment system operation
   i. Flow loading
   ii. Mass loading
   iii. Frequency and impact of shock loadings
      (1) normal cleaning and maintenance
      (2) spills and upsets
   iv. Changes in operating procedures

4. Chemical optimization

a. Information gathering
   i. Examination of wastestreams produced by specific production processes
   ii. Chemicals and raw materials and their contaminants and by-products used in the process
   iii. Chemicals used in treatment
   iv. Chemicals and material use rates
   v. Percentage of chemical in final product
   vi. Chemical reuse and waste recycling activities

b. Process chemical review
   i. List all chemicals used
   ii. List all quantities
   iii. Determine pounds per product
   iv. Determine pounds per gallon of wastewater discharged

c. MSDS information review
   i. Obtain MSDS for all process chemicals discharged
   ii. Highlight MSDS sections on aquatic toxicity
   iii. Examine Hazardous Ingredient section and note "hazardous substances" listed
   iv. Categorize all chemicals by hazard and irritation potential and use standard references to obtain aquatic toxicity information, if possible

d. Chemical composition screen of incoming raw materials

e. Outcome of chemical optimization phase
   i. List of all chemicals used in processing and manufacturing the product
   ii. MSDS and literature reviews will be on file when needed
   iii. List of all chemicals and raw material purchased on a monthly basis and a record of production volumes during the same time period

REVISED
ATTACHMENT H

Table 3-1. One-hour Average Objective for Ammonia-N for Freshwaters (mg N/L)

pH	Waters Designated COLD and/or MIGR	Waters Not Designated COLD and/or MIGR
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.885	1.32

Reference: U.S. EPA 1999 Update of Ambient Water Quality Criteria for Ammonia[1]

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[1] *For freshwaters, the one-hour average concentration (Criteria Maximum Concentration or CMC) of total ammonia as nitrogen (in mg N/L) shall not exceed the values described by the following equations.*

For waters designated COLD and/or MIGR:

$$\text{CMC or One-hour Average Concentration} = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

Or for waters not designated COLD and/or MIGR:

$$\text{CMC or One-hour Average Concentration} = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

Table 3-2. 30-day Average Objective for Ammonia-N for Freshwaters Designated SPWN (mg N/L)

Temperature, °C

pH	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6.5	6.67	6.46	6.06	5.68	5.33	4.99	4.68	4.39	4.12	3.86	3.62	3.39	3.18	2.98	2.80	2.62	2.46
6.6	6.57	6.36	5.97	5.59	5.25	4.92	4.61	4.32	4.05	3.80	3.56	3.34	3.13	2.94	2.75	2.58	2.42
6.7	6.44	6.25	5.86	5.49	5.15	4.83	4.52	4.24	3.98	3.73	3.50	3.28	3.07	2.88	2.70	2.53	2.37
6.8	6.29	6.10	5.72	5.36	5.03	4.72	4.42	4.14	3.89	3.64	3.42	3.20	3.00	2.82	2.64	2.47	2.32
6.9	6.12	5.93	5.56	5.21	4.89	4.58	4.30	4.03	3.78	3.54	3.32	3.11	2.92	2.74	2.57	2.41	2.25
7.0	5.91	5.73	5.37	5.04	4.72	4.43	4.15	3.89	3.65	3.42	3.21	3.01	2.82	2.64	2.48	2.32	2.18
7.1	5.67	5.49	5.15	4.83	4.53	4.25	3.98	3.73	3.50	3.28	3.08	2.88	2.70	2.53	2.38	2.23	2.09
7.2	5.39	5.22	4.90	4.59	4.31	4.04	3.78	3.55	3.33	3.12	2.92	2.74	2.57	2.41	2.26	2.12	1.99
7.3	5.08	4.92	4.61	4.33	4.06	3.80	3.57	3.34	3.13	2.94	2.76	2.58	2.42	2.27	2.13	2.00	1.87
7.4	4.73	4.59	4.30	4.03	3.78	3.55	3.32	3.12	2.92	2.74	2.57	2.41	2.26	2.12	1.98	1.86	1.74
7.5	4.36	4.23	3.97	3.72	3.49	3.27	3.06	2.87	2.69	2.53	2.37	2.22	2.08	1.95	1.83	1.72	1.61
7.6	3.98	3.85	3.61	3.39	3.18	2.98	2.79	2.62	2.45	2.30	2.16	2.02	1.90	1.78	1.67	1.56	1.47
7.7	3.58	3.47	3.25	3.05	2.86	2.68	2.51	2.36	2.21	2.07	1.94	1.82	1.71	1.60	1.50	1.41	1.32
7.8	3.18	3.09	2.89	2.71	2.54	2.38	2.23	2.10	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17
7.9	2.80	2.71	2.54	2.38	2.24	2.10	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17	1.10	1.03
8.0	2.43	2.36	2.21	2.07	1.94	1.82	1.71	1.60	1.50	1.41	1.32	1.24	1.16	1.09	1.02	0.957	0.897
8.1	2.10	2.03	1.91	1.79	1.68	1.57	1.47	1.38	1.29	1.21	1.14	1.07	1.00	0.938	0.879	0.824	0.773
8.2	1.79	1.74	1.63	1.53	1.43	1.34	1.26	1.18	1.11	1.04	0.973	0.912	0.855	0.802	0.752	0.705	0.661
8.3	1.52	1.48	1.39	1.30	1.22	1.14	1.07	1.00	0.941	0.882	0.827	0.775	0.727	0.682	0.639	0.599	0.562
8.4	1.29	1.25	1.17	1.10	1.03	0.966	0.906	0.849	0.796	0.747	0.700	0.656	0.615	0.577	0.541	0.507	0.475
8.5	1.09	1.06	0.990	0.928	0.870	0.816	0.765	0.717	0.672	0.630	0.591	0.554	0.520	0.487	0.457	0.428	0.401
8.6	0.920	0.892	0.836	0.784	0.735	0.689	0.646	0.606	0.568	0.532	0.499	0.468	0.439	0.411	0.386	0.362	0.339
8.7	0.778	0.754	0.707	0.663	0.622	0.583	0.547	0.512	0.480	0.450	0.422	0.396	0.371	0.348	0.326	0.306	0.287
8.8	0.661	0.641	0.601	0.563	0.528	0.495	0.464	0.435	0.408	0.383	0.359	0.336	0.315	0.296	0.277	0.260	0.244
8.9	0.565	0.548	0.513	0.481	0.451	0.423	0.397	0.372	0.349	0.327	0.306	0.287	0.269	0.253	0.237	0.222	0.208
9.0	0.486	0.471	0.442	0.414	0.389	0.364	0.342	0.320	0.300	0.281	0.264	0.247	0.232	0.217	0.204	0.191	0.179

* At temperatures below 14 °C, the objective is the same as that shown for 14 °C.

Reference: U.S. EPA 1999 Update of Ambient Water Quality Criteria for Ammonia[2]

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[2] *For freshwaters designated SPWN, the thirty-day average concentration (Criteria Continuous Concentration or CCC) of total ammonia as nitrogen (in mg N/L) shall not exceed the values described by the following equation.*

$$\text{CCC or 30-day Average Concentration} = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * MIN\left(2.85, 1.45*10^{0.028*(25-T)}\right)$$

Where T = temperature expressed in °C.

In addition, for freshwaters, the highest four-day average within the 30-day period shall not exceed 2.5 times the 30-day average objective as calculated above.

Table 3-3. 30-day Average Objective for Ammonia-N for Freshwaters Not Designated SPWN (mg N/L)

	Temperature, °C								
pH	0-7	8	9	10	11	12	13	14	15*
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.892
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.641
8.9	0.917	0.86	0.806	0.756	0.709	0.664	0.623	0.584	0.548
9.0	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471

* At 15 °C and above, the 30-day average objective for waters not designated SPWN is the same as that for waters designated SPWN.
Reference: U.S. EPA 1999 Update of Ambient Water Quality Criteria for Ammonia[3]

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[3] *For freshwaters not designated SPWN, the thirty-day average concentration(Criteria Continuous Concentration or CCC) of total ammonia as nitrogen (in mg N/L) shall not exceed the values described by the following equation.*

$$\text{CCC or 30-day Average Concentration} = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * 1.45 * 10^{0.028*(25-MAX(T,7))}$$

Where T = temperature expressed in °C.
In addition, for freshwaters, the highest four-day average within the 30-day period shall not exceed 2.5 times the 30-day average objective as calculated above.

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

STANDARD PROVISIONS, GENERAL MONITORING AND REPORTING REQUIREMENTS

"ATTACHMENT N"

A. General Requirements

1. Neither the disposal nor any handling of wastes shall cause pollution or nuisance.

2. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.

3. This discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or the State Water Resources Control Board as required by the Federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Clean Water Act, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

4. Wastes discharged shall not contain visible color, oil or grease, and shall not cause the appearance of color, grease, oil or oily slick, or persistent foam in the receiving waters or on channel banks, walls, inverts or other structures.

5. Wastes discharged shall not increase the natural turbidity of the receiving waters at the time of discharge.

6. Wastes discharged shall not cause the formation of sludge deposits.

7. Wastes discharged shall not damage flood control structures or facilities.

8. Oil or oily material, chemicals, refuse, or other pollutionable materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any spill of such materials shall be contained and removed immediately.

9. The pH of wastes discharged shall at all times be within the range 6.0 to 9.0.

10. The temperature of wastes discharged shall not exceed 100° F.

11. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

12. Effluent limitations, national standards of performance and toxic and pretreatment effluent standards established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, 318 and 405 of the Federal Clean Water Act and amendments thereto are applicable to the discharge.

B. General Provisions

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from his liabilities under federal, state, or local laws, nor guarantee the discharger a capacity right in the receiving waters.

2. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

3. The discharger must comply with all of the terms, requirements, and conditions of this order. Any violation of this order constitutes a violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, Order termination; Order revocation and reissuance, denial of an application for reissuance; or a combination thereof.

4. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.

5. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

6. The Regional Board, EPA, and other authorized representatives shall be allowed:

   a) Entry upon premises where a regulated facility is located or conducted, or where records are kept under conditions of this Order;

   (b) Access to copy any records that are kept under the conditions of this Order;

   (c) To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

(d) To photograph, sample, and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the Clean Water Act and the California Water Code.

7. If the discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the discharger must apply for and obtain a new Order.

8. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. If a toxic effluent standard or prohibition is established for toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition and so notify the discharger.

9. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

(a) Violation of any term or condition contained in this Order;

(b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

(c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

10. In the event the discharger is unable to comply with any of the conditions of this Order due to:

(a) breakdown of waste treatment equipment;

(b) accidents caused by human error or negligence; or

(c) other causes such as acts of nature,

the discharger shall notify the Executive Officer by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate

what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

11. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

12. The discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

13. The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control including sludge use and disposal facilities (and related appurtenances) that are installed or used by the discharger to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar system that are installed by a discharger only when necessary to achieve compliance with the conditions of this Order.

14. This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

15. This Order does not convey any property rights of any sort, or any exclusive privilege.

16. The discharger shall furnish, within a reasonable time, any information the Regional Board or EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

17. All applications, reports, or information submitted to the Regional Board shall be signed:

    (a) In the case of corporations, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates;

    (b) In the case of a partnership, by a general partner;

(c) In the case of a sole proprietorship, by the proprietor;

(d) In the case of municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

18. The discharger shall notify the Board of:

(a) new introduction into such works of pollutants from a source which could be a new source as defined in section 306 of the Federal Clean Water Act, or amendments thereto, if such source were discharging pollutants to the waters of the United States,

(b) new introductions of pollutants into such works from a source which would be subject to Section 301 of the Federal Clean Water Act, or amendments thereto, if substantial change in the volume or character of pollutants being introduced into such works by a source introducing pollutants into such works at the time the waste discharge requirements were adopted.

Notice shall include a description of the quantity and quality of pollutants and the impact of such change on the quantity and quality of effluent from such publicly owned treatment works. A substantial change in volume is considered an increase of ten percent in the mean dry-weather flow rate. The discharger shall forward a copy of such notice directly to the Regional Administrator.

19. The discharger shall notify the Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge appropriate filing fee.

20. The discharger shall give advance notice to the Regional Board as soon as possible of any planned physical alterations or additions to the facility or of any planned changes in the facility or activity that may result in noncompliance with requirements.

21. The discharger shall file with the Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

22. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Board as soon as they know or have reason to believe:

(a) that any activity has occurred or will occur that would result in the

discharge of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels:"

(i) One hundred micrograms per liter (100 µg/l);

(ii) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or

(iv) The level established by the Regional Board in accordance with 40 CFR 122.44(f).

(b) that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

23. Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Regional Board may take enforcement action against the discharger for bypass unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);

(b) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance; and

(c) The discharger submitted a notice at least ten days in advance of the need for a bypass to the Regional Board.

The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The discharger shall submit notice of an unanticipated bypass as required in E-16.

24. A discharger that wishes to establish the affirmative defense of an upset in an action brought for non- compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(a) an upset occurred and that the discharger can identify the cause(s) of the upset;

(b) the permitted facility was being properly operated by the time of the upset;

(c) the discharger submitted notice of the upset as required in E-16; and

(d) the discharger complied with any remedial measures required.

No determination made before an action for noncompliance, such as during administrative review of claims that non-compliance was caused by an upset,is final administrative action subject to judicial review.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

25. This Order is not transferable to any person except after notice to the Regional Board. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Board. The Regional Board may require modification or revocation and reissuance of the Order to change the name of the discharger and incorporate such other requirements as may be necessary under the Clean Water Act.

C. Enforcement

1. The California Water Code provides that any person who violates a waste discharge requirement or a provision of the California Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or

some combination thereof, depending on the violation, or upon the combination of violations.

Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

2. The Federal Clean Water Act (CWA) provides that any person who violates a permit condition or any requirement imposed in a pretreatment program implementing sections 301, 302, 306, 307, 308, 318 or 405 of the CWA is subject to a civil penalty not to exceed $25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing these sections of the CWA is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both. Any person who knowingly violates permit conditions implementing these sections of the CWA is subject to a fine of not less than $5,000, or more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or by both.

3. It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

4. The Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document submitted or required to be maintained under this Order, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this act, shall upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

D. Monitoring Requirements

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The discharger shall retain records of all monitoring information, including all calibration and maintenance monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five(5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Board or EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge.

3. Records of monitoring information shall include:

   (a) The date, exact place, and time of sampling or measurements;

   (b) The individual(s) who performed the sampling or measurements;

   (c) The date(s) analyses were performed;

   (d) The individual(s) who performed the analyses;

   (e) The analytical techniques or methods used; and

   (f) The results of such analyses.

4. All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Order.

5. All chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency.

6. The discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both
equipment activities will be conducted.

7. The discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. The annual monitoring report required in E-8 shall also summarize the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per sampling period, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.

   When requested by the Board or EPA, the discharger will participate in the NPDES discharge monitoring report QA performance study. The discharger must have a success rate equal to or greater than 80%.

8. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.

9. For parameters where both 30-day average and maximum limits are specified but

where the monitoring frequency is less than four times a month, the following procedure shall apply:

(a) Initially, not later than the first week of the second month after the adoption of this permit, a representative sample shall be obtained of each waste discharge at least once per week for at least four consecutive weeks and until compliance with the 30-day average limit has been demonstrated. Once compliance has been demonstrated, sampling and analyses shall revert to the frequency specified.

(b) If future analyses of two successive samples yield results greater than 90% of the maximum limit for a parameter, the sampling frequency for that parameter shall be increased (within one week of receiving the laboratory result on the second sample) to a minimum of once weekly until at least four consecutive weekly samples have been obtained and compliance with the 30-day average limit has been demonstrated again and the discharger has set forth for the approval of the Executive Officer a program which ensures future compliance with the 30-day average limit.

E. Reporting Requirements

1. The discharger shall file with the Board technical reports on self monitoring work performed according to the detailed specifications contained in any Monitoring and Reporting Programs as directed by the Executive Officer.

2. In reporting the monitoring data, the discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernable. The data shall be summarized to demonstrate compliance with waste discharge requirements and, where applicable, shall include results of receiving water observations.

3. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

4. The discharger shall submit to the Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

5. The discharger shall file a technical report with this Board not later than 30 days after receipt of this Order, relative to the operation and maintenance program for this waste disposal facility. The information to be contained in that report shall

include as a minimum, the following:

(a) The name and address of the person or company responsible for operation and maintenance of the facility.

(b) Type of maintenance (preventive or corrective).

(c) Frequency of maintenance, if preventive.

If an operation and maintenance report has been supplied to the Board previously and there have been no changes, a second report need not be provided.

6. Monitoring results shall be reported at the intervals specified in the monitoring and Reporting Program.

(a) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(b) If the discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(c) Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this Order.

7. Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following, each schedule date.

8. By March 1 of each year, the discharger shall submit an annual report to the Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the discharger shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the waste discharge requirements.

9. The discharger shall include in the annual report, an annual summary of the quantities of all chemicals, listed by both trade and chemical names, which are used for cooling and/or boiler water treatment and which are discharged.

10. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the Department of Health Services or

approved by the Executive Officer and in accordance with current EPA guideline procedures or as specified in this Monitoring Program".

11. Each report shall contain the following completed declaration:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility, of a fine and imprisonment for knowing violations.

Executed on the ___ day of _____ , 19__,

at _____.

_____(Signature)

_____(Title)"

12. If no flow occurred during the reporting period, the monitoring report shall so state.

13. For any analyses performed for which no procedure is specified in the EPA guidelines or in the monitoring and Reporting Program, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

14. This Board requires the discharger to file with the Board, within 90 days after the effective date of this Order, a technical report on his preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report should:

(a) Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

(b) Evaluate the effectiveness of present facilities and procedures and state when they become operational.

(c) Describe facilities and procedures needed for effective preventive and contingency plans.

(d) Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

This Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events.

Such conditions may be incorporated as part of this Order, upon notice to the discharger.

15. In the event wastes are transported to a different disposal site during the report period, the following shall be reported in the monitoring report:

(a) Types of wastes and quantity of each type;

(b) Name and address for each hauler of wastes (or method of transport if other than by hauling); and

(c) Location of the final point(s) of disposal for each type of waste.

If no wastes are transported offsite during the reporting period, a statement to that effect shall be submitted.

16. The discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
The following shall be included as information that must be reported within 24 hours under this paragraph:

(a) Any unanticipated bypass that exceeds any effluent limitation in the Order.

(b) Any upset that exceeds any effluent limitation in the Order.
(c) Violation of a maximum daily discharge limitation for any of the pollutants

listed in this Order to be reported within 24 hours.

The Regional Board may waive the above-required written report on a case-by-case basis.

17. Should the discharger discover that it failed to submit any relevant facts or that it submitted incorrect information in a report, it shall promptly submit the missing or correct information.

18. The discharger shall report all instances of non- compliance not other wise reported at the time monitoring reports are submitted. The reports shall contain all information listed in E-16.

19. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

20. Analytical data reported as "less than" for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

21. The discharger shall mail a copy of each monitoring report to:

INFORMATION TECHNOLOGY
CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD - LOS ANGELES REGION
320 W. 4TH STREET, SUITE 200
LOS ANGELES, CA 90013

A copy of such monitoring report for those discharges designated as a major discharge shall also be mailed to:

REGIONAL ADMINISTRATOR
ENVIRONMENTAL PROTECTION AGENCY
REGION 9
75 Hawthorne Street
San Francisco, CA 94105

F. Publicly Owned Wastewater Treatment Plant Requirements
(Does not apply to any other type or class of discharger)

1. Publicly owned treatment works (POTWs) must provide adequate notice to the

Regional Board of:

(a) Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants.

(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the Order.

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

2. The discharger shall file a written report with the Board within 90 days after the average dry-weather waste flow for any month equals or exceeds 75 percent of the design capacity of his waste treatment and/or disposal facilities. The discharger's senior administration officer shall sign a letter which transmits that report and certifies that the policy-making body is adequately informed about it. The report shall include:

(a) Average daily flow for the month, the date on which the instantaneous peak flow occurred, the rate of that peak flow, and the total flow for that day.

(b) The discharger's best estimate of when the average daily dry weather flow rate will equal or exceed the design capacity of his facilities.

(c) The discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for his waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

3. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.

4. The discharger shall require any industrial user of the treatment works to comply with applicable service charges and toxic pretreatment standards promulgated in accordance with Sections 204(b), 307, and 308 of the Federal Clean Water Act or amendments thereto. The discharger shall require each individual user to submit periodic notice (over intervals not to exceed nine months) of progress toward compliance with applicable toxic and pretreatment standards developed pursuant to the Federal Clean Water Act or amendments thereto. The discharger shall forward a copy of such notice to the Board and the Regional Administrator.

5. Collected screening, sludges, and other solids removed from liquid wastes shall be disposed of at a legal point of disposal and in accordance with the provisions of Section 405(d) of the Federal Clean Water Act and Division 7 of the California Water Code. For the purpose of this requirement, a legal point of disposal is defined as one for which waste discharge requirements have been prescribed by a Regional Water Quality Control Board and which is in full compliance therewith.

6. Supervisors and operators of publicly owned wastewater treatment plants shall possess a certificate of appropriate grade in accordance with regulations adopted by the State Water Resources Control Board.

   The annual report required by E-8 shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall include the date of each facility's Operation and Maintenance Manual, the date the manual was last reviewed, and whether the manual is complete and valid for the current facilities. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with this order and permit and provide a summary of performance.

G. Definitions

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility whose operation is necessary to maintain compliance with the terms and conditions of this Order.

2. "Composite sample" means, for flow rate measurements, the arithmetic mean of no fewer than eight individual measurements taken at equal intervals for 24 hours or for the duration of discharge, whichever is shorter.

   "Composite sample" means, for other than flow rate measurement,

   (a) A combination of at least eight individual portions obtained at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling;

   OR

   (b) A combination of at least eight individual portions of equal volume obtained over a 24-hour period. The time interval will vary such that the volume of wastewater discharged between samplings remains constant.

The compositing period shall equal the specified sampling period, or 24 hours, if no period is specified.

3. "Daily discharge" means:

   (a) For flow rate measurements, the average flow rate measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling.

   (b) For pollutant measurements, the concentration or mass emission rate measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling.

4. The "daily discharge rate" shall be obtained from the following calculation for any calendar day:

$$\text{Daily discharge rate} = \frac{8.34}{N} \sum_{1}^{N} (Q_i)(C_i)$$

in which N is the number of samples analyzed in any calendar day, Q_i and C_i are the rate (MGD) and the constituent concentration (mg/l) respectively, which are associated with each of the N grab samples which may be taken in any calendar day. If a composite sample is taken, C_i is the concentration measured in the composite sample and Q_i is the average flow rate occurring during the period over which samples are composited.

5. "Daily maximum" limit means the maximum acceptable "daily discharge" for pollutant measurements. Unless otherwise specified, the results to be compared to the "daily maximum" limit are based on composite samples."

6. "Duly authorized representative" is one whose:

   (a) Authorization is made in writing by a principal executive officer or ranking elected official;

   (b) Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

(c) Written authorization is submitted to the Regional Board and EPA Region 9. If an authorization becomes no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements above must be submitted to the Regional Board and EPA Region 9 prior to or together with any reports, information, or applications to be signed by an authorized representative.

7. "Grab sample" is defined as any individual sample collected in a short period of time not exceeding 15 minutes. "Grab samples" shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with "daily maximum" limits and the "instantaneous maximum" limits.

8. "Hazardous substance" means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.

9. "Heavy metals" are for purposes of this Order, arsenic, cadmium, chromium, copper, lead, mercury, silver, nickel, and zinc.

10. "Instantaneous maximum" concentration is defined as the maximum value measured from any single "grab sample."

11. "Median" of an ordered set of values is the value which the values above and below is an equal number of values, or which is the arithmetic mean of the two middle values, if there is no one middle value.

12. "Priority pollutants" are those constituents referred to in 40 CFR 401.15 and listed in the EPA NPDES Application Form 2C, pp. V-3 through V-9.

13. "6-month median" means a moving "median" of daily values for any 180-day period in which daily values represent flow-weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

14. "7-day" and "30-day average" shall be the arithmetic average of the values of daily discharge calculated using the results of analyses of all samples collected during any 7 and 30 consecutive calendar day periods, respectively.

15. "Toxic pollutant" means any pollutant listed as toxic under section 307(a)(1) of the Clean Water Act or under 40 CFR 122, Appendix D.

16. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

CEASE AND DESIST ORDER NO. R4-2007-0056

REQUIRING THE BOEING COMPANY, SANTA SUSANA FIELD LABORATORY TO CEASE AND DESIST DISCHARGES OF CONTAMINANT CONCENTRATIONS IN EXCESS OF APPLICABLE WATER QUALITY STANDARDS TO WATERS OF THE UNITED STATES

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

BACKGROUND

1. The Boeing Company (Permittee), Santa Susana Field Laboratory (SSFL) is located at the top of Woolsey Canyon Road in the Simi Hills, Ventura County, California. The site includes 2,800 acres of land; the developed portion of the site comprises approximately 1,500 acres. There is 1,200-acres of undeveloped land located to the south and additional 150-acres of undeveloped land to the north of the developed portion of the site. SSFL is owned by both the Permittee and the National Aeronautics and Space Administration (NASA). The United States Department of Energy (DOE) also owns several buildings located in Area IV, with the land being under the ownership of Boeing.

2. The Permittee and its predecessors' operations at SSFL since 1950 include research, development, assembly, disassembly, and testing of rocket engines, and chemical lasers. DOE conducted past operations in research and development of energy related programs, including nuclear reactors, and seismic testing experiments. Current DOE activities onsite are solely related to facility closure, environmental remediation, and restoration.

3. Nuclear research and development for the DOE and its predecessors was conducted at the SSFL from 1954 – 1989. The activities included developing and operating reactors, and fabricating and disassembling nuclear fuel. The government began to phase out the program in the 1960s. The last reactor was shut down in 1980, and nuclear research was terminated in 1989. This research and the associated activities resulted in contamination in Area IV.

   There are currently no programs at the SSFL which employ special nuclear materials. Current decommissioning activities have reduced the inventory of radioactive waste at the SSFL to approximately 5 curies. Essentially all of this material is stored in shielded vaults located at the Radioactive Materials Handling Facility (RMHF). SSFL continues to utilize radioisotopes in the form of calibration sources which are necessary to calibrate radiation detectors and counting equipment. Three radiological facilities located in Area IV of the SSFL remain to be decommissioned. Storm water run-off from Area IV of the SSFL is monitored for radioactivity. The DOE is responsible for the cost of decontamination and decommissioning, the California Department of Health Services (Radiological Health Branch) has radiological oversight responsibilities at Area IV of the SSFL.

July 30, 2007
Revised: October 15, 2007
Revised: November 1, 2007

4. Historical activities at SSFL that contributed to discharges from the site included rocket engine testing cooling water, operation of fire suppression equipment, and pressure testing of equipment used to support rocket engine testing. Other facility support activities such as cooling, heating, domestic waste treatment, and groundwater treatment also contributed to discharges from the site.

5. During the early 1950s to the mid-1970s, volatile organic compounds were utilized for the cleaning of hardware and rocket engine thrust chambers as well as other equipment. These solvents migrated into the subsurface, contaminating groundwater primarily with trichloroethylene (TCE) and 1, 2-dichloroethylene (1, 2-DCE). There is an extensive groundwater remediation/investigation program in progress at the SSFL, which historically included pumping, treating, and storing groundwater at the facility. This system was composed of eight treatment systems. These systems had the capability of producing up to 578 million gallons of treated groundwater per year. The groundwater was treated to remove volatile, and in some cases semi-volatile, organic compounds. The system was not designed to treat perchlorate or metals. Historically, treated groundwater was discharged directly into one of five water reclamation ponds via naturally occurring streambeds and in some cases man made watercourses present onsite. These treatment systems were regulated under Resource Conservation Recovery Act (RCRA) hazardous waste permits or administrative orders issued by Department of Toxic Substances Control (DTSC), and various air quality control permits issued by Ventura County.

   The groundwater treatment system is being reconfigured. The plan is for one system that will be located in Area 1, near CTL-V. The groundwater from all over the site will be pumped to this location for treatment. After treatment the effluent will be tested and discharged to the streambed at Outfall 019. Outfall 019 is a new compliance point located downstream of Outfall 011 and upstream of Outfall 001. The new groundwater treatment system is scheduled to begin operation in August 2007.

6. SSFL has the potential to discharge a total of approximately 272 million gallons per day (MGD) of storm water runoff and wastewater that has the potential to contain pollutants from the facilities. Approximately 60% of the discharge exits the property via southerly discharge points (Discharge Outfalls 001, 002, 011, and 018) to Bell Creek, a tributary to the Los Angeles River, a navigable water of the United States, with its confluence located near the intersection of Bassett Street and Owensmouth Avenue in Canoga Park, above the estuary.

   The remaining storm water is discharged offsite via Outfalls 003 through 007, 009, and 010 to the northwest toward the Arroyo Simi, a tributary of Calleguas Creek. Discharges from Outfall 008 in Happy Valley flows via Dayton Canyon Creek to Chatsworth Creek. Chatsworth Creek flows south to Bell Creek southwest of the intersection of Shoup Avenue and Sherman Way. Bell Creek subsequently flows southeast to the Los Angeles River.

DISCHARGE HISTORY

7. Discharges from the SSFL have been covered by a National Pollutant Discharge Elimination System (NPDES) permit since 1976.

8. On June 29, 1998, the Regional Board adopted Order No. 98-051which prescribed waste discharge requirements to the Permittee for the discharge of storm water runoff and wastewater from the SSFL.

9. On June 27, 2001, the Regional Board issued a Notice of Violation (NOV) to the Permittee for violations of the effluent limits and monitoring and reporting requirements set forth in Board Order No. 98-051. The Permittee's effluent discharges exceeded the limits for mercury (Hg), copper (Cu), BOD, total coliform, total suspended solids (TSS), cadmium (Cd), thallium (Tl), oil and grease, antimony (Sb), and NO_2 + NO_3 as Nitrogen (N) from January 2000 through March 2001 from various discharge outfalls at the SSFL site.

10. On October 19, 2001, the Regional Board issued a Revised NOV to the Permittee, which resulted in rescinding seven (7) effluent limit violations and two (2) monitoring and reporting violations noted in the June 27, 2001, NOV.

11. On April 29, 2002, the Regional Board issued Complaint No. R4-2002-0084 for Mandatory Minimum Penalty to the Permittee in the amount of $39,000 which was paid by the Permittee for effluent limit violations of Hg, Tl, oil and grease, total coliform, settleable solids, NO_2 + NO_3 as N, and fluoride from January 2000 through April 2001. Boeing waived a hearing and paid $33,000 to the State Board Cleanup and Abatement Account. The remaining $6,000 was used to fund a Regional Board approved Supplemental Environmental Project. .

12. On February 6, 2004, the Regional Board issued a NOV to the Permittee for violations of effluent limits set forth in Board Order No. 98-051. The Permittee's effluent exceeded the limits for Sb, Cd, Cu, TSS, and turbidity from August 1998 through November 2003. The NOV required submittal of a report detailing the corrective actions taken by the Permittee to achieve compliance with Board Order No. 98-051.

13. In a letter dated March 8, 2004, the Permittee responded to the February 6, 2004, NOV by listing all the corrective actions taken at the site.

14. On July 1, 2004, the Regional Board adopted Order No. R4-2004-0111 replacing Order No. 98-051, which prescribes waste discharge requirements to the Permittee for the discharge of storm water runoff and wastewater from SSFL. This order added eleven new compliance points and incorporated requirements based on the California Toxics Rule (CTR).

15. On July 30, 2004, a Petition from Committee to Bridge the Gap for Review of Regional Board Order No R4-2004-0111 was filed. The petition requested a stay of the requirements included in Order R4-2004-0111 to the extent it would remove water quality based effluent limitations for certain metals and volatile organic compounds applicable to seven outfalls at the site. On September 17, 2004, the State Board adopted Order WQO 2004-0014, which denied the petitioners request..

16. Subsequent to the adoption of Order R4-2004-0111, on August 2, 2004, the Permittee filed a petition of the permit with the State Water Resources Control Board. The permittee immediately put the petition in abeyance.

17. On March 14, 2005, the Regional Board issued a NOV to the Permittee for violations of the effluent limits set forth in Board Order No. R4-2004-0111. The Permittee's effluent exceeded the limits for Cu, Hg, 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD), and pH during the 4th Quarter 2004. The NOV required submittal of a report detailing the corrective actions taken by the Permittee to achieve compliance with Board Order No. R4-2004-0111.

18. In a letter dated April 14, 2005, the Permittee, in response to the March 14, 2005 NOV, submitted a report detailing corrective actions taken. The Permittee asserted that most of the exceedances are the result of natural causes and/or new constituents, effluent limits or methodologies in the renewed permit. The Permittee also asserted that they planned to request that the permit be modified to remove permitted discharges that were generated by operations that have been terminated (sewage treatment plants).

19. By a letter to the Regional Board dated July 15, 2005, the Permittee requested that the Regional Board reopen and revise the NPDES permit issued in July 2004 to provide a compliance schedule for all outfalls where the Regional Board adopted more stringent numerical standards or analytical procedures that are different than the previous permit ("1998 permit").

20. On October 7, 2005, the Regional Board issued a NOV to the Permittee for violations of effluent limits set forth in Board Order No. R4-2004-0111. The Permittee's effluent exceeded the limits for Hg, TCDD, residual chlorine, oil and grease, sulfate, MBAS, chromium (Cr), iron (Fe), lead (Pb), manganese (Mn), total dissolved solids (TDS), and chronic toxicity from 1st Quarter 2005 through 2nd Quarter 2005. The NOV required a report detailing the corrective actions taken by the Permittee to achieve compliance with Board Order No. R4-2004-0111.

21. In a letter dated November 4, 2005, the Permittee, in response to the October 7, 2005, NOV, again asserted that the permit exceedances were consistent with the presence of naturally occurring constituents in site soils or in ash from area wildfires, rather than a result of site operations. The Permittee asserted that significant upgrades to the Best Management Practices (BMPs), to control runoff and to attempt to bring their discharge into full compliance with the waste discharge requirements had been implemented. However, due to the Topanga Wildfire on September 28, 2005, most of the BMPs were destroyed.

22. On November 22, 2005, pursuant to section 13267 of the California Water Code, the Regional Board issued a letter and directed the Permittee to submit a technical report including a workplan outlining how and when the Permittee proposed to meet the final effluent limitations of Board Order No. R4-2004-0111. The technical report was submitted to the Regional Board on December 16, 2005.

23. On November 30, 2005, a Cleanup and Abatement Order (CAO) No. R4-2005-0077 was issued to the Permittee. The CAO was issued in response to chronic exceedances of effluent limits contained in Regional Board Order Nos. 98-051 and R4-2004-0111 as well as the increased threat of erosion of soil and ash resulting from the Topanga wildfire. The CAO ordered the Permittee to: (i) initiate a cleanup and abatement program including the implementation of all BMPs necessary to abate impacts of any erosion and ash deposition to navigable waters of the United States; (ii) implement corrective and preventative actions to bring the Permittee's discharge into full compliance with Effluent Limitations and Receiving Water Requirements contained in Regional Board Order No. R4-2004-0111; and (iii) prepare a technical report summarizing the efforts being made to cleanup and abate the condition of pollution.

24. On November 30, 2005, tentative Order No. R4-2006-0XXX Amending Order No. R4-2004-0111 was issued for public comment. The tentative Order would incorporate new effluent limits based on the reasonable potential analysis of data collected since August 20, 2004, the effective date of Order No. R4-2004-0111. The tentative order was considered at the January 19, 2006, Board Meeting, updated by the Board and adopted as Order R4-2006-0008.

25. On January 24, 2006, tentative Order R4-2006-00XX, which incorporated updates associated with the metals and nutrients TMDLs for Los Angeles River was issued for public comment. During the March 9, 2006, Board Meeting the item was considered and the proposed amendment adopted as Order No. R4-2006-0036.

26. After the adoption of Order R4-2006-0008 in January 2006 the Permittee petitioned that order, activated the previous petition and petitioned the pending amendment, Order R4-2006-0036. The permittee also requested that the permit be stayed pending a decision on the permit on the basis of merit.

27. On April 3, 2006, there was a State Board Hearing on the Permittee's request for a stay. Order WQ 2006-0002, which was adopted on April 7, 2006, from the State Board stayed effluent limitations for specified constituents at various outfalls. Subsequently, the State Board met en banc. After considering the evidence, the Board adopted Order WQ 2006-0007 on June 21, 2006, which vacated the previous Order and denied the request for a stay.

28. On December 13, 2006, after issuing a draft Order, the State Board held a public hearing to discuss issues related to the petition of the permit on the basis of merit. On that day, Order WQ 2006-0012 was issued by State Board. The Order:

- Remanded the permit to the Regional Board to revise the provisions concerning Outfalls 001, 002, 011, and 018,
- Stayed the effluent limitations at Outfalls 011 and 018 pending a determination by the Regional Board deleting either Outfalls 011 and 018 or Outfalls 001 and 002,
- Directed the Regional Board to issue a Cease and Desist Order with the shortest possible compliance schedule and interim effluent limitations, based on the effects of the Topanga Fire. The effective date of the CDO was to be January 19, 2006, and
- Review the permit to ensure that numeric effluent limitations for different outfalls do not count the same violation twice in such a manner as to treat a single violation as multiple violations.

In all other respects, the petitions were denied.

29. On February 21, 2007, the Permittee submitted the first of a number of deliverables with the final document delivered on May 24, 2007, which included a revised ROWD and other supplemental information considered during the update of the permit. The revised permit and this CDO will be considered by the Regional Board at the August 9, 2007 Board Meeting.

30. The Regional Board issued Complaint No. R4-2007-0035 for Administrative Civil Liability against the Boeing Company in the amount of $471,190. On August 27, 2007, Boeing waived its right to a hearing and submitted full payment of the civil liability. A Notice of Conclusion of Enforcement Action was issued referencing this case on September 11, 2007.

EVIDENCE OF CONTAMINATION AND BASIS FOR SECTION 13301 ORDER

31. On July 1, 2004, the Regional Board, adopted Order No. R4-2004-0111 (NPDES Permit No. CA0001309), containing Waste Discharge Requirements for the Boeing Santa Susana Field Laboratory including requirements as follows:

a) "Standard Provision A1: Neither the disposal nor any handling of wastes shall cause pollution or nuisance.."

b) "Standard Provision A2: The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or the State Water Resources Control Board as required by the Federal Clean Water Act and regulations adopted there under...."

c) "Standard Provision B3: The discharger must comply with all of the terms, requirements, and conditions of this order. Any violation of this order constitutes a violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, Order termination, Order revocation and reissuance, denial of an application for reissuance; or a combination thereof."

32. The Permittee, in self-monitoring reports submitted to the Regional Board, has reported violations of the waste discharge requirements contained in Order No. R4-2004-0111, R4-2006-0008, and R4-2006-0036. The Permittee has been discharging effluent that has chronically exceeded the effluent limits for TCDD, heavy metals and other pollutants from 1998 through 2006.

CONCLUSION

33. The unauthorized discharge of wastes by the Permittee was not permitted and is in violation of water quality objectives established in the ***1994 Water Quality Control Plan for the Los Angeles Region,*** as amended, and other applicable State and Federal Water Quality Standards.

34. The Permittee has upgraded and implemented a number of new BMPs onsite since the adoption of Order R4-2004-0111. However, discharges from the facility continue to have contaminant concentrations in excess of established effluent limitations even after the implementation of the new BMPs. This indicates that efforts to control the transport of contaminants to waters of the United States have been ineffective.

35. On September 28, 2005, the Topanga Fire resulted in damage to much of the facility. Approximately 70% of the site was burned; leaving the hills denuded of vegetation and covered in ash.

36. Immediately after the Topanga Fire, the Discharger began cleanup operations. Activities undertaken to control the transport of contaminants and BMPs that have been implemented since the Topanga Fire include:

- Cleared and repaired fire damaged access roads.
- Repaired flow meter and telemetry systems.
- Removed burned debris.
- Installed new silt fencing, straw bales and/or straw waddles at various discharge locations.
- Graveled access roads in certain areas to prevent soil migration.
- Implemented daily irrigation to promote the vegetation growth in areas where it was destroyed.
- Installed new plastic tarp using new and improved techniques for anchoring and to prevent undermining at Outfall 004.
- Designed and started construction of sand/carbon under drain filter systems at a number of Outfalls.

- Where required the area was re-graded to improve surface flow path.
- Rip rap was installed across the access road at Outfall 006.
- Implemented upgraded structural BMPs at all outfall locations in the developed portion of the site by May 2006. The upgraded BMPs in several instances included course and fine gravel beds to slow the flow of the runoff and filter bags filled with activated carbon and vermiculite, as well as silt fencing, fiber rolls, and in some cases course rip-rap.

Many of the upgraded BMPs were implemented prior to May 2006, which was reported in the *Best Management Practices Effectiveness Sampling Workplan for Santa Susana Field Laboratory* submitted to the Regional Board on October 2, 2006. However, the Permittee has continued to evaluate and upgrade the BMPs.

37. Section 13301 of the California Water Code states, in part, that:

> "When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action....."

This Cease and Desist Order (CDO) requires the Permittee to comply with established requirements or prohibitions, to comply with a time schedule, or, if the violation is threatening, to take appropriate remedial or preventative action.

38. 40 CFR Part 122.44(l)(1) requires that when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62).

39. The data collected since the adoption of Order R4-2006-0008 and R4-2006-0036 provide new information about the discharge including the concentrations of contaminants in the discharge.

40. Review of the petition by the State Board resulted in a remand of the permit to the Regional Board with a directive to issue a CDO with the shortest possible compliance schedule and interim effluent limitations. The effective date of the CDO was stipulated as January 19, 2006.

41. The Topanga Fire resulted in significant alterations to the site. The exposure of the surface soils with no vegetative cover to retard runoff has increased the potential for the transport of those surface soils and associated contaminants offsite as a result of the fire. The fire created runoff conditions at SSFL over which the Permittee has limited control. Over 70 percent of the SSFL burnt with significant areas denuded of vegetation, making much of the steep terrain highly erodible. Boeing hydromulched upwards of 800 acres and installed erosion control devices throughout much of the SSFL after the fire which occurred on September 28, 2005, and prior to January 19, 2006.

After the fire Boeing immediately began efforts to replace the BMPs that were destroyed. Many of the drainage areas were vacuumed to remove accumulated ash. The Discharger hydromulched in excess of 800 acres onsite and installed erosion control devices throughout much of the SSFL site

prior to the January 19, 2006 Board Meeting. BMPs implemented prior to the fire were typical of those routinely used at construction sites to retard the transport of sediment (silt fences, plastic sheeting, etc). In most cases, the BMPs implemented after the fire were designed to slow flows (i.e. using underdrain systems) and to treat specific contaminant groups (i.e. metals) using bags filled with carbon or vermiculite.

On May 24, 2007, Boeing submitted to the Regional Board the *Phase 2 Post-Fire Vegetation Recovery Assessment Report* prepared for Geosyntech Consultants by Western Botanical Services, Inc. The report assessed the status of and time to recovery of chaparral and scrub at the project site subsequent to the Topanga Fire. The executive summary of the report asserts that chaparral and scrub represent the dominant vegetation types at SSFL and that these plant communities represent an important natural vegetation-based means of erosion control at the site. It further states that the "perennial plant cover differed by significantly more than 30 percent between burned and unburned transects, total vegetative cover differed by significantly greater than 20 percent cover and ground cover differed by significantly more than 30 percent cover." The executive summary also states that the burned chaparral and scrub vegetation will likely recover within five to ten years.

The report also includes a section titled *Chaparral Recovery after Fire.* The section includes summaries of other studies completed on chaparral. Several studies (Guo 2001, Grace & Keeley 2006, Keeley & Keeley 1981, Horton & Kraebel 1955, Robi Chaud et al 2000) concluded that the total vegetative cover is generally high in the first two years following a fire: reported values are from 11 to 85 percent. The report estimates that between March 26 and April 12, 2007, the mean total vegetative cover within the burned areas is 46.6 percent.

42. The discharge from SSFL is currently primarily storm water runoff. The size of the site and the volume of storm water runoff generated presents challenges with treating the entire volume of rainfall. An estimate of the 85th percentile of the 1-year 24-hour storm event, the site specific "design storm" for the site resulted in a storm depth of 2.3 inches using the Los Angeles County Department of Public Works (LADWP) estimation models. The new BMPs implemented were designed to treat the storm water runoff generated by a storm depth of that size.

43. During discussions with the Permittee on February 23, 2007, there was a request to treat the discharges from Outfalls 008 and 009 differently from the other storm water only outfalls. Outfalls 008 and 009 are located in jurisdictional drainages where engineered BMP installation may be impractical. Historical data confirms that treatment is required to meet the effluent limitations included in the NPDES permit. The Permittee has proposed a conceptual natural BMP design study as the mechanism to meet the final effluent limitations proposed for discharges from these locations. The natural BMPs will be strategically located to control erosion and sediment from specific source areas, and RCRA RFI Sites throughout the subwatershed. The natural BMPs will include erosion and sediment controls (such as surface roughening and use of soil binders) and structural treatment devices (such as treatment wetlands and bioretention areas). An independent team of experts will be convened to evaluate site conditions including contaminants in the vicinity, evaluate the natural BMPs, their documented effectiveness and their performance under site conditions, to select the appropriate BMPs, the design and implementation. The goal of the natural BMPs implemented is to meet the final effluent limitations included in Order R4-2007-0055.

44. This CDO is an action taken for the protection of the environment and, as such, is exempt from the provisions of the California Environmental Quality Act in accordance with California Code of Regulations, title 14, section 15321.

The Regional Board notified Boeing, interested agencies, and parties of its intent to issue a CDO. The Regional Board heard and considered all testimony pertinent to this matter in a public hearing. All Orders referred to above and records of hearings and testimony therein are included herein by reference.

IT IS HEREBY ORDERED that, in accordance with section 13301 of the California Water Code, the Boeing Company shall cease and desist all discharges of contaminants in excess of the effluent limits stipulated in Order No. R4-2007-0055 and this CDO, by complying with the following:

1. Interim effluent concentrations specified in Tables 1 and 2, which shall be deemed effective from January 19, 2006, through August 31, 2006.

Table 1: Outfalls 001, 002, 011, and 018:

Constituent	Daily Maximum		Basis
	Concentration	Mass[1]	
Chromium	100µg/L	--	MEC
Copper	55 µg/L	--	MEC
Lead	160 µg/L	--	MEC
Mercury	0.13 µg/L	--	MEC
Manganese	120 µg/L	--	MEC
TCDD	4.6E-06 µg/L	--	MEC
Iron	92 mg/l	--	MEC

Table 2: Outfalls 003 through Outfall 010:

Constituent	Daily Maximum		Basis
	Concentration	Mass[1]	
Antimony	35µg/L	--	MEC
Copper	39 µg/L	--	MEC
Lead	260 µg/L	--	MEC
Mercury	0.89 µg/L	--	MEC
TCDD	9.1 E-04 µg/L	--	MEC
Thallium	3.1 µg/L	--	MEC

2. Discharges from Outfalls 001 through 011, and 018 after August 31, 2006, shall comply with the limitations specified in Order R4-2006-0036 until the effective date of Order R4-2007-0055.

[1] The permitted mass is calculated using the following formula:

Mass (lbs/day) = 8.34 * Flow (MGD)*Concentration (mg/L)

where the flow is the actual recorded flow for that discharge event.

3. Submit for approval to the Executive Officer by December 15, 2007, a workplan to evaluate, select and implement natural BMPs for Outfalls 008 and 009. The workplan shall contain the following components:

   a. A time schedule that begins on November 1, 2007, and ends on June 10, 2009.

   b. Assembly of a panel to review site conditions, modeled flow, contaminants of concern, and evaluate the BMPs capable of providing the required treatment to meet the final effluent limits.

   c. A description of the BMPs to be utilized. Design the BMPs and develop a plan for BMP implementation. Purchase required materials.

   d. A schedule for the installation of the BMPs at Outfalls 008 and 009.

   e. A schedule to evaluate the BMPs' performance.

4. Discharges from Outfalls 008 and 009 on June 10, 2009, and thereafter, shall comply with the final effluent limits that appear in I.B.4. of Order R4-2007-0055.

5. Submit a final report on the results of the BMP implementation and evaluation and final recommended BMPs by August 15, 2009. The report should include a description of the new BMPs considered and/or evaluated, any sample data collected during the evaluation of BMPs, and the results of BMP effectiveness evaluations with quality assurance results.

The Permittee shall immediately comply with all other effluent limitations and requirements contained in Order R4-2007-0055.

This CDO is not intended to permit or allow the Permittee to cease any work required by any other order issued by the Regional Board, nor shall it be used as a reason to stop or redirect any investigation or cleanup or remediation programs ordered by the Regional Board or any other agency. Furthermore, this CDO does not exempt the Permittee from compliance with any other laws, regulations, or ordinances which may be applicable, and it leaves unaffected any further restrictions which may be contained in other statutes or required by other agencies.

This CDO does not preclude the Regional Board from taking any enforcement action, including but not limited to complaints for administrative civil liability for the discharge of effluent concentrations exceeding the effluent limitations specified in Order R4-2004-0111, R4-2006-0008, R4-2006-0036, or subsequent Orders.

The action taken by this Regional Board does not preclude the possibility of actions to enforce this CDO by third parties pursuant to Section 505 of the Federal Clean Water Act.

Should Permittee fail to comply with any provision of this CDO, the Executive Officer is authorized to request the Attorney General to take appropriate action against the Permittee, including injunction and civil monetary remedies, pursuant to appropriate California Water Code sections, including but not limited to, sections 13331, 13350, 13385 and 13386.

RESCISSION

Cleanup and Abatement Order No. R4-2005-0077, adopted by this Regional Board November 30, 2005, is hereby rescinded except for enforcement purposes.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on November 1, 2007.

Tracy J. Egoscue
Executive Officer